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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,497	12/03/2001	Rainer Gräfe	Mo6566/LeA 34,399	8050
157	7590	06/10/2004	EXAMINER	
BAYER POLYMERS LLC 100 BAYER ROAD PITTSBURGH, PA 15205			REDDICK, MARIE L.	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 06/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,497

Applicant(s)

GRAEFE ET AL.

Examiner

Judy M. Reddick

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/26/04:03/25/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1713

DETAILED ACTION

Response to Arguments

1. Appellant's arguments(03/25/04) have been carefully considered and found persuasive. Therefore, the rejection of claims 1 & 3-5 under 35 U.S.C. 103(a) over Vanderbilt et al(U.S. 3,447,572) is herein withdraw. However, in view of the newly discovered prior art, PROSECUTION IS HEREBY REOPENED. A rejection of the claims (1 & 3-5), based on said newly discovered prior art, is deemed proper and is as set forth infra. An apology is extended to Appellants for any inconvenience that this may have caused.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 & 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The recited "polymers based on conjugated dienes and acrylonitrile-----with latexes based on conjugated dienes and acrylonitrile" per claim 1 constitutes indefinite subject matter as per it not being readily ascertainable as to how many "polymers based on conjugated dienes", "conjugated dienes" and "latexes" are intended.

B) The recited "wherein the latexes based on conjugated diene and acrylonitrile are latexes having a polymer, by weight content, in the range from 10 to 50 %" per claim 3 constitutes indefinite subject matter as per it not being readily ascertainable as to the exact entity that the contents are being based on, i.e. "mixtures of powdered polyvinyl chloride and latexes based on conjugated dienes and acrylonitrile", latex(es) or else.

Claim Rejections - 35 USC § 102

Art Unit: 1713

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3 & 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Adler et al (U.S. 3,864,432).

Adler et al disclose and exemplify a process for the production of an elastomer treated thermoplastic polymer in a pourable powder form from a thermoplastic resin granule and an elastomer dispersion (latex) which is characterized in that an aqueous elastomer resin dispersion is added to a thermoplastic polymer, in powder form, and the two components are mixed in a mixer with rapidly rotating agitators below the gelling temperature of the thermoplastic polymer to homogeneous distribution of the elastomer resin on said thermoplastic polymer powder. More specifically, the invention involves a process for the production of an elastomer treated thermoplastic polymer in a pourable powder form consisting essentially of adding an aqueous elastomeric resin dispersion to a thermoplastic polymer powder, mixing the two components under high sheer agitation at below the gelling temperature of said thermoplastic plastic powder for a time sufficient to obtain a homogeneous distribution of the elastomeric resin on said thermoplastic powder and recovering said elastomer treated thermoplastic polymer in a pourable powder form, as well as the elastomer

Art Unit: 1713

treated thermoplastic polymer in a pourable powder form produced by the process wherein the thermoplastic polymer, in powder form, is governed by an average particle size of from 20 to 500 microns and includes polymers such as polyvinyl chloride having a K value of 70(col. 2, lines 65-67, Run 1) and the elastomer resin latexes include synthetic rubber latexes such as acrylonitrile/butadiene/styrene copolymers(see the Abstract, col. 1, lines 20-67 and col. 2, lines 1-17 of Adler et al and claim 1). Adler et al further, @ col. 2, lines 18-24, teach that for 100 parts of the thermoplastic polymer, in powder form, a maximum of 50 parts of a 50 percent aqueous elastomeric resin dispersion is employed and that if these dispersions contain less than 50 percent by weight of solids, only so much dispersion is added so that not more than 25 parts by weight of water per 100 parts of thermoplastic polymer are present in the mixer(claim 3). Adler et al @ col. 2, lines 41-44 further teach that the mixing temperatures are maintained between 70 and 100 degrees C(claim 5). Adler et al further, @ col. 2, lines 45-53, teach that toward the end of the mixing operation, it is advantageous in some cases to add to the mixing stock from 0.05 to 10 percent by weight, preferably 0.5 to 1.5 percent by weight based on the total mixer charge, of finely divided substances as, for example, highly dispersed silicic acid, talc, aluminum oxide, titanium oxide, chalk, and asbestos flour so as to, in some cases, increase the pourability of the polymer mixture obtained (claim 1). See also Runs 2, 4 & the claims of Adler et al. Adler et al therefore anticipate the instantly claimed invention with the understanding that the process for the production of an elastomer treated thermoplastic polymer per Adler et al overlaps in scope with the claimed method of producing mixtures of polyvinyl chloride and polymers based on conjugated dienes and acrylonitrile.

Even if it turns out that the Examiner has somehow missed the boat and the claims are not anticipated by Adler et al, it would have been obvious to the skilled artisan to extrapolate, from the disclosure of Adler et al, the specifically defined method of producing mixtures of PVC and NBR latexes as per such having been within the purview of the general disclosure of Adler et al and with a reasonable expectation of success.

Art Unit: 1713

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adler et al (U.S. 3,864,432).

Adler et al is relied upon for all that is taught as stated in the Grounds of Rejection supra as applied to claims 1, 3 & 5. Further, the disclosure of Adler et al differs basically from the claimed invention as per the express disclosure of an embodiment directed to the specifically defined polymer based on conjugated dienes and acrylonitrile, as claimed. However, the synthetic rubber of Adler et al, which includes an acrylonitrile/butadiene/styrene elastomer

Art Unit: 1713

resin, is generic thereto and necessarily implies that any elastomer resin, including the claimed conjugated diene/acrylonitrile polymer would have been operable within the scope of patentees invention and with a reasonable expectation of success, absent some evidence of unusual or unexpected results.

Conclusion

11. The prior art to Nakamura et al (U.S. 4,547,549), listed on an earlier FORM PTO 14499(2/03/03), is noted with interest in teaching a process for producing a powdery composite polymer composed of (A) a particulate PVC having an average particle diameter of not more than 200 micrometers, (B) a nitrile group-containing elastomer, in latex form and (C) a solvent for component (B) wherein said process involves mixing (A), (B) and (C) at a temperature of 80 degrees (Cols. 1-3 and Run 1). The prior art to ANTEMANN et al (DD 156612A) is cited as of interest in teaching a mixture consisting of a latex of 60-90 % butadiene and 10-40 % styrene and/or acrylonitrile and PVC powder (ABSTRACT). A rejection, in the future, may be made based on this prior art. The remaining prior art, listed on the Attached FORM PTO 892, is cited as of being illustrative of the general state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (571)272-1110. The examiner can normally be reached on Monday-Friday, 6:30 a.m.-3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 1713

Judy M. Reddick
Judy M. Reddick
Primary Examiner
Art Unit 1713

JMR *JMR*
06/06/04